

# Claims

[c1] What is Claimed is:

Claim 1. A text-entry system based on trigger sequences comprising  
1) a plurality of keys,  
2) a plurality of pre-conversion symbols,  
3) a plurality of post-conversion symbols, each of said post-conversion symbols set in a correspondence to a sequence of said pre-conversion symbols,  
4) a plurality of symbol-input-end symbols,  
5) a display to display symbols,  
6) a first mechanism to display said pre-conversion symbols in response to keystrokes, and  
7) a second mechanism to recognize trigger sequences and thereby trigger conversion of a plurality of said pre-conversion symbols displayed on said display by said first mechanism to a plurality of said post-conversion symbols, said trigger sequences comprising a subsequence of said keystrokes said subsequence comprising at least two of said keystrokes such that the first of said keystrokes in said subsequence causes said first mechanism to display one of said pre-conversion symbols, and the second of said keystrokes in said subsequence generates one of said symbol-input-end symbols, where said generated symbol-input-end symbols applies to said displayed pre-

conversion symbol and where said second keystroke does not additionally display any of said pre-conversion symbols which follow in sequence in any sequence in said correspondence between sequences of pre-conversion symbols to post-conversion symbols, whereby upon recognition of one of said trigger sequences conversion of a plurality of said displayed pre-conversion symbols to a plurality of said post-conversion symbols is effected without the need for a keystroke on a dedicated convert key.

- [c2] Claim 2. The text-entry system of Claim 1 further characterized in that 1) said pre-conversion symbols are comprised of tone marks and symbols selected from the set of Latin and Bopomofo symbols, 2) said post-conversion symbols are comprised of Hanzi, and 3) said first keystroke of said subsequence causes said first mechanism to display one of said tone marks and said second keystroke of said subsequence generates one of said symbol-input-end symbols, said generated symbol-input-end symbol applying to said displayed tone mark.
- [c3] Claim 3. The text-entry system of Claim 1 further comprising a plurality of non-conversion symbols, and further characterized in that 1) said pre-conversion symbols are comprised of cHiragana, 2) said post-conversion symbols are comprised of Kanji, 3) said non-conversion

symbols are comprised of Hiragana, 4) said first mechanism is effective to display a set of symbols comprising said pre-conversion symbols, said post-conversion symbols, and said non-conversion symbols, and 5) said trigger sequences are comprised of two classes, where elements of the first of said classes are characterized in that said first keystroke of said subsequence causes said first mechanism to display one of said cHiragana, and said second keystroke of said subsequence generates one of said symbol-input-end symbols, said symbol-input-end-symbol generated by said second keystroke of said subsequence applying to said displayed cHiragana, where said second keystroke of said subsequence is assigned to one of said keys to which none of said cHiragana have been assigned, and elements of the second of said classes are characterized in that said first keystroke of said subsequence causes said first mechanism to display one of said cHiragana, and said second keystroke of said subsequence generates one of said symbol-input-end symbols, said symbol-input-end-symbol generated by said second keystroke of said subsequence applying to said displayed cHiragana, where said second keystroke of said subsequence also causes one of said non-conversion symbols to be displayed by said first mechanism and a third keystroke which generates one of said symbol-input-end symbols which applies to said

displayed non-conversion symbol causing it to be input.

[c4] Claim 4. The text-entry system of Claim 1 further comprising a plurality of non-conversion symbols, and further characterized in that 1) said pre-conversion symbols are comprised of cLatin symbols, 2) said post-conversion symbols are comprised of Kanji, 3) said non-conversion symbols are comprised of Latin symbols and Hiragana4) said first mechanism is effective to display a set of symbols comprising said pre-conversion symbols, said post-conversion symbols, and said non-conversion symbols, and 5) said trigger sequences are comprised of two classes, where elements of the first of said classes are characterized in that said first keystroke of said subsequence causes said first mechanism to display one of said cLatin symbols, and said second keystroke of said subsequence generates one of said symbol-input-end symbols, said symbol-input-end-symbol generated by said second keystroke of said subsequence applying to said displayed cLatin symbol, where said second keystroke of said subsequence is assigned to one of said keys to which none of said cLatin symbols have been assigned, and elements of the second of said classes are characterized in that said first keystroke of said subsequence causes said first mechanism to display one of said cLatin symbols, and said second keystroke of said

subsequence generates one of said symbol-input-end symbols, said symbol-input- end-symbol generated by said second keystroke of said subsequence applying to said displayed cLatin symbols, where said second keystroke of said subsequence also causes one of said non-conversion symbols to be displayed by said first mechanism and a third keystroke which generates one of said symbol-input-end symbols which applies to said displayed non-conversion symbol causing it to be input.

- [c5] Claim 5. The text-entry system of Claim 1 further comprising a plurality of non-conversion symbols, and further characterized in that 1) said pre-conversion symbols are comprised of Latin symbols, 2) said post-conversion symbols are comprised of Kanji, 3) said non-conversion symbols are comprised of Hiragana4) said first mechanism is effective to display a set of symbols comprising said pre-conversion symbols, said post-conversion symbols, and said non-conversion symbols, and 5) said trigger sequences are comprised of two classes, where elements of the first of said classes are characterized in that said first keystroke of said subsequence causes said first mechanism to display one of said Latin symbols, and said second keystroke of said subsequence generates one of said symbol-input-end symbols, said symbol-input-end-symbol generated by

said second keystroke of said subsequence applying to said displayed Latin symbol, where said second keystroke of said subsequence is assigned to one of said keys to which none of said Latin symbols have been assigned, and elements of the second of said classes are characterized in that said first keystroke of said subsequence causes said first mechanism to display one of said Latin symbols, and said second keystroke of said subsequence generates one of said symbol-input-end symbols, said symbol-input-end-symbol generated by said second keystroke of said subsequence applying to said displayed Latin symbol where said second keystroke of said subsequence also causes one of said non-conversion symbols to be displayed by said first mechanism and a third keystroke which generates one of said symbol-input-end symbols which applies to said displayed non-conversion symbol causing it to be input.

[c6] Claim 6. The text-entry system of Claim 1 further comprising a plurality of non-conversion symbols, and further characterized in that 1) said pre-conversion symbols are comprised of cJamo, 2) said post-conversion symbols are comprised of Hanja, 3) said non-conversion symbols are comprised of Jamo, 4) said first mechanism is effective to display a set of symbols comprising said pre-conversion symbols, said post-conversion symbols,

and said non-conversion symbols, and 5) said trigger sequences are comprised of two classes, where elements of the first of said classes are characterized in that said first keystroke causes said first mechanism to display one of said cJamo, and said second keystroke generates one of said symbol-input-end symbols, said symbol-input-end-symbol generated by said second keystroke applying to said displayed cJamo, where said second keystroke is on a key to which none of said cJamo have been assigned, and elements of the second of said classes are characterized in that said first keystroke causes said first mechanism to display one of said cJamo, and said second keystroke generates one of said symbol-input-end symbols said symbol-input-end-symbol generated by said second keystroke applying to said displayed cJamo, where said second keystroke also causes one of said non-conversion symbols to be displayed and a third keystroke which generates one of said symbol-input-end symbols which applies to said displayed non-conversion symbol causing it to be input.

- [c7] Claim 7. The text-entry system of Claim 1 further comprising a third mechanism to convert said pre-conversion symbols to said post-conversion symbols.

- [c8] Claim 8. The text-entry system of Claim 7 further characterized in that said third mechanism is physically remote from said first mechanism.
- [c9] Claim 9. The text-entry system of Claim 7 further characterized in that said third mechanism performs said selection based on the context of other symbols previously input.
- [c10] Claim 10. The text-entry system of Claim 1 further comprising a predictive text mechanism operating to select said pre-conversion symbols for display based on the context of other symbols previously input
- [c11] Claim 11. The text-entry system of Claim 1 further comprising at least one Next key for advancing the display of symbols.
- [c12] Claim 12. The text-entry system of Claim 1 further comprising a multi-tap mechanism for advancing the display of symbols.
- [c13] Claim 13. The text-entry system of Claim 2 further characterized in that each time one of said tone marks is displayed, it is only displayed after a plurality of said Latin symbols have been displayed but not input.
- [c14] Claim 14. The text-entry system of Claim 1 further com-

prising a plurality of non-conversion symbols, a Next key applying to said plurality of pre-conversion symbols, and a Next key applying to said plurality of non-conversion symbols.

- [c15] Claim 15. The text-entry system of Claim 3 further characterized in that a plurality of symbols comprising said pre-conversion symbols and said non-conversion symbols are assigned to said keys in a substantially Iroha ordering.
- [c16] Claim 16. A method for constructing trigger sequences for a text-entry system comprising the steps of 1) selecting a set of pre-conversion and post-conversion symbols, 2) selecting a text-entry mechanism, 3) determine the set of keystroke sequences which correspond to the set of possible texts to be entered using said text-entry system, 4) for each pre-conversion symbol generated by each of said keystroke sequence in said set of keystroke sequences, finding a subsequence of said keystrokes such that a) one of said keystrokes in said subsequence displays one of said pre-conversion symbol and b) another of said keystrokes in said subsequence i) generates a symbol-input-end symbol which applies to said one pre-conversion symbol, and ii) does not additionally display any of said pre-conversion symbols which follow said one pre-conversion symbol in any sequence of said

pre-conversion symbols which correspond to one of said post-conversion symbols, and 5) returning to said step of selecting said set of said pre-conversion and said post-conversion symbols in the event that said step of finding said subsequences fails to produce satisfactory subsequences.

- [c17] Claim 17. A text-entry mechanism comprising 1) a plurality of keys, 2) an assignment of Hiragana to said plurality of keys in a substantially Iroha ordering, and 3) a mechanism to display said Hiragana in response to keystrokes.
- [c18] Claim 18. The text-entry system of Claim 1 further characterized in that said pre-conversion symbols are comprised of words.
- [c19] Claim 19. The text-entry system of Claim 18 further comprising a word-completion mechanism.
- [c20] Claim 20. The text-entry system of Claim 2 further characterized in that said tone mark appears at the end of said order after any of said Latin symbols.